

on nineteen years, in Québec on eighteen, and in the Maritime Provinces on seventeen years; consequently, March appears to be more likely to go out like a lion than a lamb. As to the idea that if March comes in rough it will go out quietly, or vice versa, there is nothing in the records to justify this assumption, for during the past thirty years these conditions were maintained in twelve years only, in Ontario and Québec, and in eleven in the Maritime Provinces. With such a long series of records opposed to the generally conceived notions of the dreaded conditions to be anticipated in March, it must be allowed that the supposed eccentricities of the weather of the month are largely illusory.

Many of the old sayings and proverbs regarding the weather and its changes have been handed down in Canada from generation of descendants chiefly from the British Isles, and these legends if applicable to the weather conditions of those Islands, which is very doubtful, are not so to a continental climate such as we enjoy.

Ontario, Québec, and the Maritime Provinces have only been treated of in this paper because similar records of the winds, etc., are not available for the remaining parts of Canada, however, there can be no apparent reason why the same sequence of changes experienced over the districts reviewed should not occur elsewhere in the Dominion and in fact throughout the northern temperate zone generally; i. e., a marked decrease in stormy weather as the season advances toward the spring and summer.

#### CLIMATOLOGY OF COSTA RICA.

Communicated by H. PITTIER, Director, Physical Geographic Institute.  
[For tables see the last page of this REVIEW preceding the charts.]

*Notes on the weather.*—On the Pacific slope the drought was excessive and continuous, but for a few light squalls of rain during the 27th, 28th, and 29th. In San José the pressure was slightly above the normal, while the heat and relative humidity were less. The sunshine records show an excess of about thirty-two hours above the general mean. On the Atlantic slope the rainfall was almost everywhere in excess of previous years, except on the coast belt where the drought was rather marked, and provoked, in Port Limon and its surroundings, a spell of bad fevers and general diseases.

*Notes on earthquakes.*—March 2, 6<sup>h</sup> 47<sup>m</sup> p. m., slight shock NW-SE, intensity I, duration 3 seconds. March 12, 2<sup>h</sup> 25<sup>m</sup> a. m., pretty generally felt shock N-S, intensity II, duration 4 seconds. March 21, 4<sup>h</sup> 40<sup>m</sup> a. m., prolonged vibration E-W, intensity II, duration 15 seconds. March 30, 5<sup>h</sup> 33<sup>m</sup> a. m., long oscillatory movement WNW-ESE, intensity III, duration 30 seconds. The same earthquake was officially reported from Cachi and San Isidro de Alajuela and was generally felt all through the interior of the country.

#### RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a —.

*Science.* London. N. S. Vol. 17.

Bolton, Henry Carrington. Origin of the word "Barometer." Pp. 547-548.

Ward, R. DeC. Bigelow's Barometry. [Note on report by F. H. Bigelow.] Pp. 595-596.

Ward, R. DeC. Meteorological Observations in Bosnia. [Note on article by Hann.] P. 596.

Ward, R. DeC. High Winds on the Pacific Coast. [Note on article in Annual Report of the California Climate and Crops.] P. 596.

*Scientific American.* New York. Vol. 88.

Crookes, William. Sir William Crookes on Radium. P. 311.

*Scientific American Supplement.* New York. Vol. 55.

— The New Observation Kites invented by S. F. Cody. P. 22804.

— Kites as Meteorological Instruments. P. 22823.

*Proceedings of the Royal Society.* London. Vol. 49.

Lockyer, Norman and Lockyer, William J. S. Relation between Solar Prominences and Terrestrial Magnetism. Pp. 244-250.

Russell, W. J. On the formation of Definite Figures by the Deposition of Dust. Pp. 285-287.

*Aeronautical Journal.* London. Vol. 7.

Anderson, John. The Kite Equipment of the Scottish National Antarctic Expedition. Pp. 25-28.

Alexander, Patrick Y. The Aërosac. P. 28.

Blackden, L. S. Observations and Experiments relative to Equilibrium in Air of a Body Heavier than Air. Pp. 28-40.

*Symons's Meteorological Magazine.* London. Vol. 58.

— Great Dustfall of February, 1903. Pp. 21-24.

Stupart, R. F. Canadian Climate. Pp. 31-33.

*American Journal of Science.* New Haven. 4th series. Vol. 15.

Trowbridge, J. Gaseous Constitution of the H and K lines of the Solar Spectrum, together with a discussion of reversed gaseous lines. Pp. 243-248.

*Physical Review.* Lancaster. Vol. 16.

Barus, O. The Nucleation during Cold Weather. Pp. 193-198.

*Scottish Geographical Magazine.* Edinburgh. Vol. 19.

Mossmann, R. C. Meteorological Notes. Pp. 180-183.

*Nature.* London. Vol. 67.

Rosse, Lord. Effects of the Gale of February 26. P. 462.

Windsor, E. V. Hygrometric Determinations. Pp. 463-464.

Harding, Chas. Remarkable Winters. Pp. 466-467.

S., F. J. J. Movement of Air studied by Chronophotography. Pp. 487-488.

— Accumulation of Meteorological Observations. Pp. 497-498.

— Lodge, Oliver. Radium Emission. P. 511.

Rutherford, E. Radio-Activity of Ordinary Materials. Pp. 511-512.

Crookes, William. Emanations of Radium. Pp. 522-524.

Milne, J. Seismometry and Gëite. Pp. 538-539.

— Variation of Solar Radiation received on the Earth's Surface. [Note on article by Henri Dufour.] P. 545.

Russell, W. J. Formation of Definite Figures by the Deposition of Dust. Pp. 545-546.

— London Fog Inquiry, 1901-02. Pp. 548-549.

*Comptes Rendus de l'Académie des Sciences.* Paris. Tome 136.

Curie, P. and Laborde, A. Sur la chaleur dégagée spontanément par les sels de radium. Pp. 673-675.

Chauveau, A. B. Sur les poussières éoliennes du 22 février. Pp. 776-777.

Mascart, E. Remarques sur la note précédente. Pp. 777-778.

Pellat, H. De la température absolue déduite du thermomètre normal. Pp. 809-811.

Fonvielle, W. de. Hypothèse de J. B. Biot pour expliquer la hauteur de l'atmosphère. P. 835-837.

*Ciel et Terre.* Bruxelles. 2<sup>me</sup> année.

Prinz, W. Analyse de la boue tombée en Belgique le 22 février 1903. Pp. 25-31.

L., V. D. Les vents dominants indiqués par les arbres. [Note on article by J. Früh.] P. 41-42.

Van der Linden, E. La pluie de poussière des 21 et 22 février 1903. Pp. 49-55.

Chauveau, A. B. Historique des théories relatives à l'origine de l'électricité atmosphérique. Pp. 59-70.

*Annuaire de la Société Météorologique de France.* Paris. 51<sup>me</sup> année.

Maillet, Edmond. Résumé des observations centralisées par le Service Hydrométrique du bassin de la Seine, pendant l'année 1901. Pp. 21-28.

Besson, Louis. Un nouveau néphoscope. Pp. 29-31.

Raulin, V. M. Sur les observations pluviométriques faites dans l'Asie centrale Russe. Pp. 37-42.

*La Géographie.* Paris. Vol. 7.

Bénard, Charles. Les courants de l'Atlantique Nord et du golfe de Gascogne. Pp. 1-18.

*Journal de Physique.* Paris. 4<sup>me</sup> série. Tome 2.

Mathias, E. Théorie des phénomènes critiques et la vaporisation. Contribution à la théorie des dissolutions. [Note on article by J. Traube.] Pp. 206-211.

*Annalen der Physik.* Leipzig. Vierte Folge. Band 10.

Toepler, Max. Ueber Funkenlängen und Anfangsspannungen in Luft von Atmosphärendruck. Pp. 730-747.